(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
24 February 2005 (24.02.2005)

PCT

(10) International Publication Number
WO 2005/017358 A1

(51) International Patent Classification[7]: F04B 39/12

(21) International Application Number:
PCT/KR2004/002000

(22) International Filing Date: 10 August 2004 (10.08.2004)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
20-2003-0026124 13 August 2003 (13.08.2003) KR

(71) Applicant (*for all designated States except US*): KOREA WESTERN POWER CO., LTD [KR/KR]; 167, Samseong 1-dong, Gangnam-gu, Seoul 135-091 (KR).

(72) Inventor; and
(75) Inventor/Applicant (*for US only*): KIM, Yong-hak [KR/KR]; 104-2104, Hankook Apts., Yeonhui-dong, Seo-gu, Incheon 404-836 (KR).

(74) Agent: LEE, Se Jin; Daeyang International Patent Law Office, 2F, Inseong Building, 437-3 Bangbae-dong Seocho-gu, Seoul 137-817 (KR).

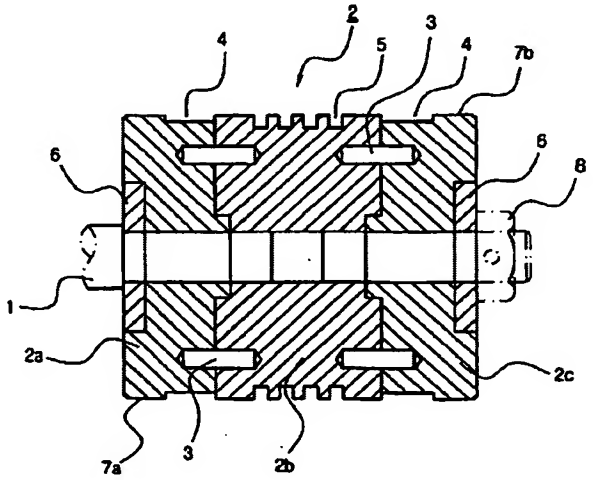
(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

[Continued on next page]

(54) Title: DIVIDED-TYPED PISTON STRUCTURE HAVING GROOVE FOR ASSEMBLING A RIDER RING IN AIR COMPRESSOR



(57) Abstract: A divided-type piston of an air compressor, in which a piston rod shaft is inserted into a center portion thereof and reciprocally moves within a cylinder, has a piston body. The piston body is divided into an upper piston, an intermediate piston and a lower piston, and these pistons are integrally fixed and assembled by using a positioning pin, provided that the upper piston and the lower piston are formed with rider ring assembling grooves, and the intermediate piston is formed with compression ring assembling grooves. The rider rings are easily assembled to and disassembled from the piston, the time for assembling and disassembling the 10 rider rings is shortened, and the components of the piston can be prevented from damage when the rides rings are assembled and disassembled.

WO 2005/017358 A1